Tree islands enhance biodiversity and ecosystem functioning in oil palm landscapes

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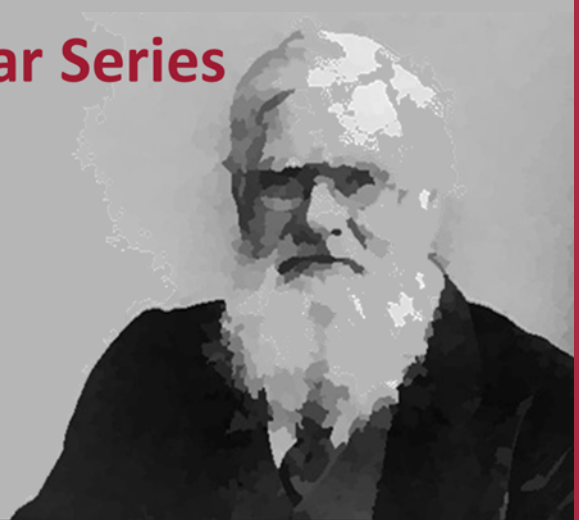
Summary: The expansion of large-scale cash crop monocultures is a main driver of global biodiversity and ecosystem functioning losses. In the tropics, oil palm production has increased 15-fold in the last decades and is likely to increase further in the near future. Therefore, there is an urgent need to enhance biodiversity and ecosystem functioning in human-transformed tropical ecosystems while minimizing trade-offs with agricultural productivity. Using a unique and novel experiment of 52 tree islands established in an oil palm landscape in Sumatra, Indonesia, we found that tree islands provide multidimensional ecological restoration benefits at local and landscape levels without compromising yield. Yet, strategies aiming to enhance multi-taxa diversity should consider scale-dependent landscape-biodiversity relationships across taxa as well as the central role of below-ground biotic and abiotic conditions.

Date: December 7th 2023
Time: 14h (UTC±0)

zoom

The Alfred Wallace Seminar Series



Chair Rui Nabeiro biodiversity

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